

Trans-disciplinary Research Workshop – Complex Social Networks

Professor Liaquat Hossain

Aim

The aim of the workshop would be to provide a comprehensive overview of trans-disciplinary science approach to studying complex social networks (CSN). We will engage the students and create awareness of the fundamentals of investigating CSN, highlight the overall approach to design of the instrument or procedure for observing/collecting data from existing sources, and discuss the process involved in analysis of CSN dataset. We will then orient students with a number of existing research, which provides a good coverage of broader context of CSN in life, engineering, information, physical as well as organizational science so that students are able to appreciate the applications of CSN theory and methods using the basis of trans disciplinary science.

Content

The workshop has four themes:

1. Understanding of trans disciplinary science, computational science and network science research paradigm;
2. Awareness and understanding of classical social network theories (SNT);
3. Awareness of the social networks analysis (SNA) methodological foundations which involves overall understanding of social networks analysis, approaches to data collection and analysis; and
4. Awareness of the application and use of SNT and SNA for research in information systems/science and management.

Organization

This is a 3-hour workshop and a 3-hour follow up, in which students explore readings, intense discussion, and research writing as well as poster presentation. Students in groups of 2-3 will at the end of the first workshop be required to draw up a 3-page concept plan on how to apply the complex networks to their own research. The assignments would be submitted before the start of the second workshop. Teacher will give feedback to students during the second workshop and guide them to produce their work into posters.

There will be a selection of the posters to enter the Trans-disciplinary Challenge Award Competition tentatively scheduled for the afternoon of May 12, 2017.

Workshop Registration

The workshop is limited to a maximum of 30 students. This workshop focuses on the following issues: 1) what is trans-disciplinary science research 2) how has the complex social science or computational social science field evolved and where is it going, 3) the international academic field of complex networks research and theories, 4) approaches, methodologies, and methods in SNA research, 5) combining different

approaches, methodologies, and methods, and, 6) social science and network science research.

Tasks

Draw up a 3-page paper (co-authored) showing a good understanding of the issues addressed in the workshop and how they apply to the student's research area(s); and develop a poster from the paper to compete for the Trans-disciplinary Challenge Award.

Outcomes

At the end of the workshop, students will develop and demonstrate their awareness in the following areas:

1. Trans-disciplinary Science Research Paradigm
2. Process Involved in Studying Complex Social Networks (CSN)
 - a. Overview of CSN
 - b. Application of CSN in different research disciplines
 - c. Strategies for data collection: studying active/passive networks
 - d. CSN data analysis procedure
3. Current Research in CSN
 - a. Key questions guiding this research area
 - b. Overview of different research labs in CSN
 - c. CSN research in different disciplines
 - i. Organizational Context
 - ii. IS and Knowledge Management Context
 - iii. Financial Markets and Systems
 - iv. Computer, IT and/or Socio-technical Systems
4. Exploring common ground/framework for studying different systems, their interaction, and application of complex networks in their domain of investigation.

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